

such discussed differences are intended to merely help the Examiner appreciate important claim distinctions discussed thereafter.

One embodiment of the applicants' present invention disclosed in the specification relates to the positioning of the read/write transducer heads of a hard disc in a designated landing zone when requested or when the electrical power is removed from the drive. For instance, one embodiment relates to the detection of the back electromotive force (BEMF) of the motor involved in the positioning of the read/write transducer heads. Various example embodiments of the invention are described on page 2, lines 29-30, page 3, lines 1-19, and in the description accompanying Figures 3 and 4. In particular, various embodiments of the invention operate in a continuous mode where a current is present in the coil when a calibration operation related to BEMF measurement and detection is performed. See, *e.g.*, page 3, lines 5-10, and lines 17-20 of the present application.

In contrast, Carobolante discloses a system that is different than what is described in the applicants' specification. In particular, Carobolante discloses a system for measuring a BEMF voltage of a voice-coil motor. The system includes an amplifier connected across the coil to produce an output signal proportional to a voltage across the coil and a circuit connected to selectively connect the output signal to the amplifier to an output circuit when a driving current is not applied to said coil. A sample window is generated after drive currents within the coil have been allowed to decay to zero, and between a time during which a PWM signal changes from negative to positive and a time when the PWM waveform crosses a voltage error value. See, *e.g.*, the Abstract of Carobolante. Accordingly in Carobolante, the BEMF measurement is done when the current coil is null, *i.e.*, in discontinuous mode.

The applicants' claim 1 as originally presented is believed to be allowable over Carobolante because it recites "a BEMF detection circuit for a voice-coil motor operative to continually generate a signal proportionally to the velocity of said voice-coil motor." However, to facilitate prosecution, claim 1 has been further amended herein to recite that calibration is performed while the current is in the coil in a continuous mode. As recited in the claim, the signal from the BEMF detection circuit is continually generated proportionally to the velocity of the voice-coil motor. This signal is based in part from an input into an algebraic summing node that is derived from a voltage proportional to the current in the coil. Because the continuous

mode feature where current is in the coil is not disclosed, taught, or suggested by Carobolante, claim 1 is allowable over Carobolante.

Moreover, there is no motivation or suggestion to modify Carobolante to produce an output signal when a driving current is still present in the coil. Carobolante's technique is based on allowing the current in the coil to decay to zero, so as to generate a sample window for the PWM signal. *See, e.g.*, the Abstract and Figure 4 of Carobolante.

Claim 4 is also believed to be allowable over Carobolante as originally presented because it recites continually generating a signal proportionally to the velocity of the voice-coil motor. Claim 4 has been further amended to recite that the current is in the coil in a continuous mode, and therefore further distinguishes and makes the claim allowable over Carobolante.

Other amendments have been made to independent claims 1 and 4 to correct antecedent basis language. Amendments have been made to dependent claims 2 and 3 to further clarify the language recited therein. New claims 6-13 recite features that are allowable over the references of record.

Overall, none of the references singly or in any motivated combination disclose, teach, or suggest what is recited in the independent claims. Thus, given the above amendments and accompanying remarks, the independent claims are now in condition for allowance. The dependent claims that depend directly or indirectly on these independent claims are likewise allowable based on at least the same reasons and based on the recitations contained in each dependent claim.

If the undersigned attorney has overlooked a teaching in any of the cited references that is relevant to the allowability of the claims, the Examiner is requested to specifically point out where such teaching may be found. Further, if there are any informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact the undersigned attorney at (206) 622-4900.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Version With Markings to Show Changes Made.**"

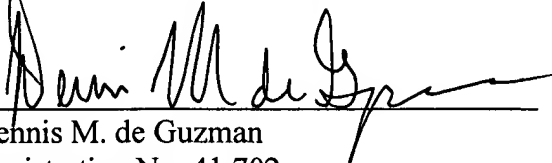
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All of the claims remaining in the application are now clearly allowable.  
Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

Roberto Peritore et al.

SEED Intellectual Property Law Group PLLC

  
Dennis M. de Guzman  
Registration No. 41,702

DMD:mmmb

Enclosure:

Associate Power of Attorney  
Postcard

701 Fifth Avenue, Suite 6300  
Seattle, Washington 98104-7092  
Phone: (206) 622-4900  
Fax: (206) 682-6031